UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,670	04/11/2001	Robert Daniel Maher III	NR-8	1803

7590 07/15/2004	**EXAMINER**
Craig J. Cox	PATEL, ASHOKKUMAR B
NETRAKE CORPORATION	

ART UNIT	PAPER NUMBER
2154	

3000 Technology Drive, Suite 100
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DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/832,670	MAHER ET AL.
	Examiner	Art Unit
	Ashok B. Patel	2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) *19-23* is/are allowed.

6) ☒ Claim(s) *1-5,7-15,17 and 18* is/are rejected.

7) ☒ Claim(s) *6 and 16* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1. Application Number 09/832, 670 was filed on 04/11/2001. Claims 1-23 are subject to examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3-5, 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated Lin (US 6, 542, 508).

Referring to claim 1,

The reference teaches a network processing system for enforcing network policies on a network, the network consisting of multiple data packets, the data packets forming a plurality of flows, the network processing system (Abstract) comprising:

a network interface operable to receive data packets from the network and further operable to send processed data packets back onto the network; and (Fig.3, element 403,"data path")

a processing engine in communication with the network interface (Fig.3, element 106), the processing engine operable to associate each data packet with an identifier, wherein the identifier is associated with the flow of which the data packet is part, the processing engine further operable to compare each flow to a database stored in the processing engine, the database storing information on a set of programmable network policies, the set of programmable network policies determining a treatment for each flow, such that the processing engine is able to modify and direct the data packets according to the treatment indicated.(col.4, lines 54-67 thru col.5, lines 4-25 and Fig.3).

Referring to claims 3 and 4,

The reference teaches the network processing system of claim 1 wherein the processing engine maintains a state for one or more flows, the state associated with each flow using the identifier, and wherein the state existing for the particular flow at the time a new packet belonging to the particular flow is examined is used in conjunction with the database to determine the treatment.(col.4, lines 65-67 thru col.5, lines 1-10).

Referring to claim 5,

The reference teaches the network processing system of claim 1 wherein the processing engine is able to examine the entire contents of each packet. (col.5, lines 11-25).

Referring to claim 7,

The reference teaches the network processing system of claim 1 wherein the set of programmable network policies are stored as signatures in a signature memory. (Fig.3, element 202).

Referring to claim 8,

The reference teaches the network processing system of claim 1 wherein the

processing engine includes a header preprocessor for examining header information in

the packet, a content processor for comparing the packet to the database and

determining a treatment, and a quality of service processor for modifying the packet and

directing the packet according to the treatment. (col.4, lines 29-34, Fig.3, elements 206,

col.3, lines 44-50, col.4, lines 35-37).

Referring to claim 9,

The reference teaches the network processing system of claim 8 wherein each

processing engine further includes a microprocessor for supplemental operations.

(Fig.3, elements 206, Abstract).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
> are such that the subject matter as a whole would have been obvious at the time the invention was made to
> a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

5.   Claims 2, 10-15 and 18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lin (US 6, 542, 508)

Referring to claim 2,

Keeping in mind the teachings of the reference Lin as stated above, the reference fails

to teach a second processing engine, wherein each processing engine is unidirectional

in the opposite direction thereby creating a bi-directional network processing system.

However, if another identical policy engine, taught by Lin, is added to the network

processing system, then the system can have an ability to handle the traffic flow

independently in opposite directions. Therefore, it would have been obvious to one

having ordinary skill in the art at the time of invention was made to provide two policy

engines identical to the one taught by Lin such that the traffic from two directions can be

handled, and as such producing bi-directional policy engine incorporated into the

network processing system.

Referring to claims 10, 11 and 12,

The reference teaches network processing system for enforcing network policies on a

network, the network consisting of a plurality of data packets, the plurality of data

packets forming a plurality of flows, the network processing system (Abstract)

comprising:

at least one left line interface operable to receive data packets from the network

and to send processed data packets onto the network; (Fig.3, element 403, "data path")

a right processing engine receiving data packets from the left interface, and

sending processed data packets to the right line interface;(Fig.3 , element 106)

the right processing engine further comprising:

a traffic flow processor (Fig. 3, element 204, flow classifier)processing the data

packets to associate each data packet with a particular flow, to maintain state for a

subset of flows, and to compare each flow to a database of network policies, the data

base of network policies indicating a treatment for the data packets of each flow;

a quality of service processor(Fig.3, element 206, action processor) communicating with the traffic flow processor and receiving the treatment from the traffic flow processor instructing the quality of service processor how to modify the contents of the data packet and which quality of service to give the data packet. (col.4, lines 65-67 thru col.5, lines 1-10).

The reference fails to teach at least one right line interface operable to receive data packets from the network and to send processed data packets onto the network; and a left processing engine receiving data packets from the right interface, and the left processing engines further comprising: a traffic flow processor processing the data packets to associate each data packet with a particular flow, to maintain state for a subset of flows, and to compare each flow to a database of network policies, the data base of network policies indicating a treatment for the data packets of each flow; a quality of service processor communicating with the traffic flow processor and receiving the treatment from the traffic flow processor instructing the quality of service processor how to modify the contents of the data packet and which quality of service to give the data packet. However, if another identical policy engine, taught by Lin, is added to the network processing system, then the system can have an ability to handle the traffic flows independently in opposite directions. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to provide two policy engines identical to the one taught by Lin such that the traffic from two directions can be handled, and as such producing bi-directional policy engine incorporated into the network processing system.

Referring to claim 13,

The reference Lin teaches the network processing system of claim 10 wherein the traffic flow processor is comprised of a header preprocessor and a content processor, the header preprocessor operable to examine header information for each packet, and the content processor operable to compare the packet with the database of network policies. (col.4, lines 29-34, Fig.3, elements 206, col.3, lines 44-50, col.4, lines 35-37).

Referring to claim 14,

The reference Lin teaches the network processing system of claim 10 wherein the database of network policies is a memory image of signatures, the signatures forming the network policies. (Fig.3, element 202).

Referring to claim 15,

The reference Lin teaches the network processing system of claim 10 wherein the state existing for the particular flow at the time a new packet belonging to the particular flow is examined is used in conjunction with the database to determine the treatment. (col.4, lines 65-67 thru col.5, lines 1-10).

Referring to claim 18,

The reference teaches the network processing system of claim 10 wherein the left and right processing engines further comprise a microprocessor for supplemental processing operations. (Fig.3, elements 206, Abstract).

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (US 6, 542, 508) in view of Natarajan et al. (hereinafter Natarajan)(US 6, 751, 662).

Referring to claim 17,

Keeping in mind the teachings of the reference Lin as stated above, the reference fails to teach wherein the management interface is further operable to retrieve statistical and event information from each of the network processing systems. The reference Natarajan teaches "A feedback-based adaptive network is described wherein at least a portion of the network elements report operating information relating to network conditions to a centralized data store. The information which is reported to the data store is analyzed by a policy engine which includes a plurality of application specific plug-in policies for analyzing selected information from the data store and for computing updated control information based upon the analysis of the information." (Abstract).(the management interface is further operable to retrieve statistical and event information from each of the network processing systems.). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify Lin by adding the capabilities of Natarajan such that based on the information retrieved from the network is analyzed by the policy engine and If it is determined that a particular characteristic of the network does not conform with the standards established for that characteristic, the policy which controls that particular characteristic of the network may be automatically and dynamically modified to thereby affect the network performance as taught by Natarajan. It is well known in the art to establish communications and

exchange information between different components and modules such that the control over the network in maintained.

Allowable Subject Matter

Referring to claims 6 and 16,

Claims 6 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Referring to claims 19-23,

Claims 19-23 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (703) 305-2655. The examiner can normally be reached on 8:00am-5:00pm.
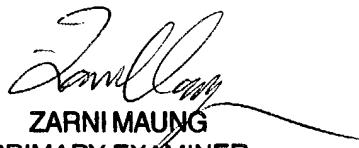
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Abp
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ZARNI MAUNG
PRIMARY EXAMINER